

NIOSH Issues First Closed-Circuit Escape Respirator Approval Under New Certification Requirements

The National Institute for Occupational Safety and Health (NIOSH) has issued the first approval for a respirator that complies with the new requirements for Closed-Circuit Escape Respirators (CCERs). The approval comes approximately nine months ahead of the deadline established for companies to transition to the new requirements. The new requirements are intended to strengthen emergency respiratory protection for workers relying on these devices during life-threatening escape situations.

Approval TC-13G-0001 was issued to Avon Protection Systems, Inc. on July 24, 2014 for its ER-2 EEBD. The ER-2 EEBD is certified by NIOSH as a Cap I, 20-liter, CCER for use in non-mining applications. This device provides the user with 20 liters of oxygen to escape from atmospheres considered to be immediately dangerous to life and health.

“The improvements made to these devices under the new standard include features and capabilities such as sensors to warn the user of any change to the device performance and the capability for devices to withstand more rugged environments. In addition, enhanced evaluations using a breathing simulator establish a more reliable testing process,” states Maryann D’Alessandro, Ph.D., Director of the National Personal Protective Technology Laboratory, the NIOSH Division responsible for certifying respirators.

The new testing and certification requirements were established by NIOSH in a new standard for CCERs published in 2012. The purpose of the updated requirements is to enable NIOSH to more effectively ensure the performance, reliability, and safety of CCERs.

Known in the Navy and commercial shipping industry as emergency escape breathing devices/apparatus (EEBD/EEBA) and in the mining community as self-contained self-rescuers (SCSR), closed-circuit escape respirators are the most compact technology capable of providing self-contained, breathable air to workers in emergencies, such as escape from a shipboard fire below deck or a smoke-filled mine from a mine fire. The devices are also

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found in other work environments such as tunneling operations in construction and for crew members in locomotive cabs on freight trains carrying hazardous materials.

Due to their compact size, CCERs are often carried on a worker's belt or they may be found stored in close proximity to be accessible in an emergency. Closed-circuit technology recirculates and replenishes the user's breathing air making the most efficient use of the oxygen it contains. Carbon dioxide is chemically removed, and oxygen is replenished from either chemical reaction, or from a compressed-oxygen supply. The newly certified product relies upon compressed gaseous oxygen.

More information about NIOSH's testing and certification program can be found at <http://www.cdc.gov/niosh/npptl/>.

NIOSH is the federal agency that conducts research and makes recommendations for preventing work-related injuries and illnesses. It was established under the Occupational Safety and Health Act of 1970. For further information, visit www.cdc.gov/niosh.

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